



PC SYSTEMS

FAQ

Q I want to buy a Media Center PC to record television, but how much hard disk space should I look for?

A Recording live television eats through disk space quicker than any other application you're likely to use. How much disk space Media Center uses depends on the quality of the video, which you can change for each recording (Good, Better or Best).

Media Center uses 3GB of disk space per hour at the Best quality setting, 2GB an hour for Better and 1GB an hour for Good. A 160GB hard disk has around 140GB of free storage space after Windows is installed and space is allocated for the Pause TV function. At the Best quality setting, this gives around 47 hours of recorded TV, which should be enough for most people.

However, you also have to think about what else you want to store on your PC. If you're going to use your Media Center for your music library and photo albums as well as downloaded and home movies, the amount of disk space you have left can fall drastically. We recommend you go for a minimum of 160GB for a hard disk if all you're going to do is record TV. If you're also going to store all your media, go for a minimum of 250GB, but get a bigger disk if you have a large media library.

Q I'm not really interested in games. Should I go for integrated graphics or opt for a dedicated graphics card when I buy my new PC?

A It depends what you want to do and the equipment you'll use. If you have a monitor with an analogue input, onboard graphics will be fine and should easily cope with your applications.

However, if you want more choice in the display to which you want to connect, you'll need a dedicated graphics card. All the models you're likely to buy now will have at least two outputs: one digital and one analogue. This means you can use an LCD monitor with a digital input for a better picture. You can also use two monitors together and spread your desktop over both. Most graphics cards also have TV-out, so you can connect your PC to a standard TV. This is useful if you want to view pictures or videos stored on your PC on a large screen.

As you're not interested in games, you can opt for the cheapest graphics card available, such as an nVidia nForce 6200 or ATI Radeon X300. Don't be tempted to get a faster graphics card, as you won't use its features.

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▲ Dedicated graphics cards have at least two outputs

REVIEW DESKTOP PC

APPLE
17" iMac G5 with iSight

RATING ★★★★★

PRICE £899 inc VAT

SUPPLIER Apple Computer 08000 391010

DETAILS www.apple.com/uk

As with previous iMacs, this computer is built into its monitor. It has a widescreen 17" flat panel, which is great for watching DVDs. There's also an iSight webcam, which you can use for video conferences over the internet. It produces surprisingly good-quality video, too.

One of the main reasons to own a Mac is that they come with pretty much all the software you'll ever need. The iMac G5 doesn't disappoint, and the iLife suite of video-, music- and photo-editing software is easy to grasp and produces great results.

The main new features of the iMac are its remote control and Media Center-style Front Row. Press the button on the remote and the Front Row interface takes over the iMac's screen and lets you play video, DVDs, photos and music. Front Row can play any format supported by Apple's QuickTime software although some, such as WMV, require paid-for plug-ins. Fast forwarding through certain videos can be jerky, and Front Row loses your place in a video if you decide to do something else.

The omission of a TV tuner is odd, especially since iTunes TV episode downloads are not yet available outside the US. Although external third-party tuners can be added, these use their own software and not Front Row. Photos and music are stored in the included iTunes and iPhoto programs.

Since the iMac doesn't run the usual Windows-dependent *Shopper* benchmarks, we conducted an informal video-encoding test to get an idea of its performance. Tasked with converting a 220MB MPEG1 movie into DV format using QuickTime Pro,



the iMac took a mere 14 minutes and 50 seconds; a similarly priced 2.4GHz Athlon 64 3800+ with 512MB of RAM took 53 minutes and a 3GHz Pentium 4 took 32 minutes.

Unfortunately, the iMac won't excel in gaming given its underpowered and non-upgradable Radeon X600 graphics card. It will struggle with future games and even current games that have high levels of detail enabled. We would also prefer more RAM and a larger hard disk.

The iMac's slim design means there is no room for internal expansion beyond adding extra memory to the single vacant slot. However, with its built-in Bluetooth and WiFi, there's little to upgrade. A bigger problem is that this iMac is not user-serviceable like the previous iMac G5, so any repairs require you to send the whole thing back to Apple.

The iMac isn't for those who want to play games or install lots of upgrades. But for general-purpose computing, it's a great choice.

Alan Lu

✓ Sleek design; easy-to-use software; respectable application performance

✗ Hard to upgrade; uninspiring 3D performance; no TV tuner

SPECIFICATIONS 1.9GHz PowerPC G5 processor, 512MB RAM, 160GB hard disk, DVD+/-RW DL, 128MB ATI Radeon X600 graphics, 17" widescreen LCD. Part code MA063B/A

HOTLIST DESKTOP PC

CARRERA
Octan CS-02

RATING ★★★★★

PRICE £850 inc VAT

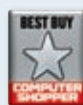
SUPPLIER Watford Electronics

08716 661616

DETAILS www.savastore.com

Carrera's Octan CS-02 has a powerful dual-core Athlon 64 X2 3800+ processor and it did particularly well in our video-encoding test, scoring 180. Its overall score of 156 is pretty good, too, so this PC should cope with any application you want to use. It's helped along by a generous 1GB of RAM.

Graphics are supplied by an ATI Radeon X800GT graphics card, which powered Doom 3 to a respectable 39.8fps. It will happily cope with today's games. The 17" Sony LCD is easy to adjust, but its backlight was slightly uneven and white areas of the screen were not totally pure. A 250GB hard disk is standard for the price and



offers plenty of room for your pictures, music, videos and applications. The Octan is a powerful computer at a good price.

SPECIFICATIONS AMD Athlon 64 X2 3800+, 1GB RAM, 250GB hard disk, 256MB ATI Radeon X800GT, DVD+/-RW DL, 17" LCD

REVIEW **DESKTOP PC****PACKARD BELL**
1538 Entertainment PC

RATING ★★

PRICE £680 inc VAT

SUPPLIER PC World 08702 420444

DETAILS www.pcworld.co.uk

Packard Bell's 1538 sits firmly in the mid-range category. However, our tests show that it isn't amazing value for money.

Its 512MB of RAM is a little stingy and the single DIMM means you don't get the benefit of dual-channel memory. The 3GHz Pentium 4 processor is similarly disappointing. It might have an attractive speed rating, but further investigation revealed it to be the budget 519 processor. This processor has less cache and no Hyper-Threading, which is annoying if you want to use your PC for processor-intensive tasks.

Unfortunately, corner-cutting is evident pretty much everywhere on the 1538. The nVidia GeForce 6200LE/TC PCI Express graphics card is a cut-down version of a card that's already a budget model, and it really shows. Its miserable performance in our 3D tests was due not only to its crippled specification but also to the fact that it supplements its 64MB of onboard memory with 192MB of main memory when it runs a 3D game.

The rest of the 1538's specification isn't quite as poor, but you could get far more for your money from any of the big mail-order suppliers. The 160GB

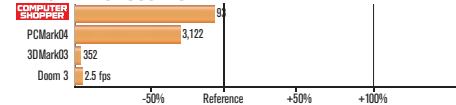


hard disk is surprisingly large, but Packard Bell has made the bizarre decision to split it into two partitions: a too-small 30GB C: drive and a large 111GB D: drive. The use of Windows XP Media Center Edition is odd, but it means that you get the most from the TV tuner. This and the 56K modem occupy the only two PCI slots, so you'll need to throw out something to install anything else.

The Samsung 17" LCD is pretty good. While its image isn't the best we've seen, it is crisp, clear and fine for general Windows use. It sits very low on the desk, though, and there's no vertical adjustment. Its built-in speakers aren't much cop, either, but then neither are the ultra-cheap pair supplied. Worse still, the unbranded keyboard and mouse that Packard Bell has seen fit to include are truly awful. The featherweight keyboard has a horribly shallow action and the two-button mouse complete with ball is barely usable.

The 1538 is very expensive, and you can find much better deals from big mail-order companies.

Julian Prokaza

PERFORMANCE SCORES

✓ Large hard disk; reasonable monitor

✗ Poor value; corner-cutting specification

SPECIFICATIONS 3.06GHz Pentium 4 519 processor, 512MB memory, 160GB hard disk, DVD+/-RW +/-DL, 64MB nVidia GeForce 6200LE/TC, 17" LCD.
Part code 1538

HOTLIST **DESKTOP PC****PC NEXTDAY**
Zoostorm 6-5403

RATING ★★★★★

PRICE £850 inc VAT

SUPPLIER PC Nextday

sales@pcnextday.co.uk

DETAILS www.pcnextday.co.uk

PC Nextday's Zoostorm has excellent 3D graphics performance thanks to its 128MB nVidia GeForce 6800XT graphics card. It sailed through our Doom 3 test with an excellent score of 46fps, proving that gaming isn't going to be a problem for this PC.

The Athlon 64 3800+ processor is more than powerful enough for day-to-day applications, as the Zoostorm's score of 118 in the *Shopper* benchmarks shows. Unfortunately, only 512MB of memory is supplied, and we're used to seeing at least 1GB.

The AOC LM728 17" monitor is good enough, but it produces a disappointingly bluish white. PC



Nextday more than makes up for this with the bundled HP PSC 1410 multifunction peripheral. Its quality is very good, but running costs are quite high. The 250GB hard disk should prove large enough for your storage needs.

The Zoostorm has no onsite warranty and only 512MB of RAM. Still, it is fast in 3D games and performs well in Windows. If you'll use the wireless networking and printer, it's a great buy.

SPECIFICATIONS AMD Athlon 64 3800+, 512MB RAM, 250GB hard disk, 128MB nVidia GeForce 6800XT, DVD+/-RW DL, DVD-ROM, 17" LCD



Our round-up of the best new gadgets and software

GENIUS
Look 312 Webcam

RATING ★★

PRICE £28 inc VAT

SUPPLIER www.cclonline.comDETAILS www.geniusnet.co.uk

The Look 312 is a webcam disguised as a cute puppy dog clad in dungarees, and it quickly became the mascot of *Shopper* Labs. The manual focus lens is hidden in his snout and the USB 1.1 cable is tucked away in a pouch in his dungarees. His bendable legs allow him to be perched on a monitor or sat on a desk without leaving paw prints.

Unfortunately, while the 640x480 pixel AVI files play back smoothly, the grainy video is blurry, out of focus, pixelated and washed out: a right dog's dinner. The video capture and snapshot software works fine, but the interface's cryptic icons will be indecipherable to some.

In appearance the Look 312 is the mutt's nuts, but as a webcam it should be put down.

Alan Lu

**GENIUS**
ColorPage-BR600

RATING ★★★★★

PRICE £45 inc VAT

SUPPLIER www.pcnextday.co.ukDETAILS www.geniusnet.co.uk

The ColorPage-BR600 is a USB-powered portable business card scanner.

However, its small size means that cards bigger than A8 size won't fit through the scanner. And despite its name, it scans only in greyscale.

The Cardlris scanning software doubles as a basic contacts manager. The optical character recognition was generally accurate, although it was thrown by odd-shaped cards, website addresses and corporate logos. The resulting contacts information can be exported to various formats, including Outlook and VCard.

Competing devices can cost up to four times as much as the BR600. Even with its limitations, this is a bargain.

Alan Lu





BYTE SIZE!



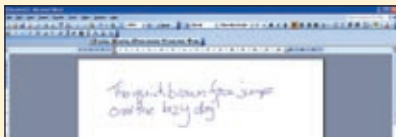
Our round-up of the best new gadgets and software

WACOM JustWrite Office

RATING ★★★★★

PRICE £20 inc VAT

DETAILS www.wacom-shop.net



JustWrite Office is designed to be used with graphics tablets, so you can use handwritten text in Office documents. Installation puts a new toolbar on all your Office applications.

You can add a signature, which appears in your document as a single image file. JustWrite lets you write whole handwritten entries. It works by firing up a separate application into which you write; closing it down pastes the results into your document. It works well enough and picked up our pen strokes, but it's far from perfect. It doesn't support Wacom's Tablet eraser function, so you have to select the eraser icon manually. What's more, it isn't pressure sensitive.

Still, while it's basic in operation, its integration with Office makes it useful for the occasional handwritten addition.

David Ludlow

WACOM Graphire4 A6

RATING ★★★★★

PRICE £65 inc VAT

SUPPLIER www.pcwb.com

DETAILS www.wacom.com

Wacom's Graphire4 A6 tablet is one of the smallest on the market, but it comes with a lot, including a copy of Photoshop Elements 3.0.

The tablet connects via USB and is controlled by the supplied pen. It is pressure-sensitive, so you can get more natural-looking hand-drawn lines. The rear of the pen also acts as an eraser. There are two buttons and a scroll wheel, allowing you to move quickly around a window and alter the zoom factor of a photo.

The small size makes precise actions difficult, so we'd suggest a larger model instead.

David Ludlow



REVIEW GAMING PC

MESH X-Treme Fire FX

RATING ★★★★★

PRICE £1,838 inc VAT

SUPPLIER www.meshcomputers.com

DETAILS Mesh Computers 08700 464747

The X-Treme Fire is one of the first CrossFire systems from Mesh and is aimed at hardcore gamers. It has a pair of 256MB ATI Radeon X850 XT graphics cards, which blitzed their way through our Doom 3 test. To push the X-Treme harder, we increased the bright, blur-free Phillips 20" monitor to its native 1,600x1,200 resolution and reran the test. The result was a smooth 59.7fps.

The X-Treme should have no trouble running the latest graphically intensive games. However, its graphics performance is only around the same level as that provided by a single nVidia 7800 GTX card, and that card can provide even more performance when teamed with another in SLI mode.

Fortunately, the X-Treme Fire FX is more than just two graphics cards in CrossFire mode. With all the emphasis placed on graphics, sound quality is often forgotten. This PC's Creative X-Fi sound card delivers 7.1 surround sound through a full-bodied and powerful-sounding set of Creative T7900 speakers. It also has EAX processing, which delivers more realistic sound through games that support it, such as Doom 3. The dual-core Athlon X2 4400+ processor is no slouch either, and did particularly well in our video-encoding test. Most current



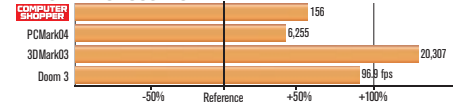
games won't take advantage of the extra core, so the appeal of the dual-core processor is limited for now, although titles that support it are starting to be released.

The X-Treme's powerful games performance comes at a price. The massive cooling fans on the CrossFire cards produce a lot of noise, which is distracting. The presence of two graphics cards as well as the X-Fi sound card and a riser for the FireWire port means that filling the one remaining PCI slot will be a tight fit. The DVD writer is a little on the slow side, writing two-layer discs at just 4X. The massive 500GB hard disk should be more than enough, though, and there are two free drive bays for adding more storage. We would prefer a memory card reader as well as a wired keyboard and mouse instead of the bundled wireless set. A more attractive case design would have helped, too.

The biggest problem with this PC is that it's very expensive. You can get similar gaming performance at a much lower price with a single-core processor and a 7800GTX graphics card. But if you have the money, you'll get a lot of high-end components and excellent peripherals with this PC.

Alan Lu

PERFORMANCE SCORES



Excellent performance; great sound system; spacious hard disk



Expensive; noisy

SPECIFICATIONS AMD Athlon 64 X2 4400+, 1GB RAM, 500GB hard disk, DVD+/-RW +/-DL, DVD-ROM, two 256MB ATI Radeon X850 XT graphics cards, 20" LCD

HOTLIST DESKTOP PC

SONY Vaio VGC-RC102

RATING ★★★★★

PRICE £1,173 inc VAT

SUPPLIER www.savastore.com

DETAILS www.sony-europe.com

The Vaio RC102's sleek appearance looks like something out of the film *2001: A Space Odyssey*. It doesn't have a monitor, but it has stereo speakers and a good wireless keyboard and mouse.

Designed as a media centre, the Vaio comes with a remote control that accesses Sony's interface. The software is easy to use and you can play video and music as well as viewing photos. The software can also be used to record television, although you need a tvtx.co.uk subscription if you want an EPG. Sony bundles the Vaio with a media receiver, so you can view all your media in a different room in the house. The media receiver has wired and wireless network connections, so it's a shame the Vaio has only a single wired port.



There is 320GB of hard disk storage provided by two 160GB hard disks in RAID 0 (striping). This is more than generous, and it should easily accommodate even the largest of digital media libraries.

This is a fine – although slightly pricy – choice for people who need a powerful general-purpose PC and a way of beaming their media around the house.

SPECIFICATIONS Intel Pentium D 820 processor, 1GB RAM, two 160GB hard disks, DVD+/-RW +/-DL, DVD-ROM, 256MB nVidia GeForce Go 6600 graphics card. Part code VGC-RC102



CHOOSING A...

PC
SYSTEM

Follow our simple step-by-step guide to buying a PC and get the perfect system for your needs

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

PROCESSOR: Athlon 64 3000+

MEMORY: 256MB DDR

HARD DISK: 160GB

STORAGE: 52X CD-RW/16X DVD
combo drive

SOUND: Integrated

SPEAKERS: Stereo

GRAPHICS: Integrated

MONITOR: 17" LCD

EXTRAS: 56K modem

CONNECTORS: 4x USB2, network

SOFTWARE: Windows XP Home Edition

BASICS: Keyboard, mouse

1 The minimum specification of PC we recommend, shown in grey opposite, is a good starting point when working out your ideal system. This PC would cost around £500 and is perfectly capable of running everyday office, multimedia or education software, as well as doing anything on the internet. But it's an unexciting PC. It will be able to play DVD movies, but they won't sound too impressive and games are a total no-no.

2 If you're interested in editing your own movies, you'll need a DVD rewriter. Make sure that you get one that supports both +R and -R formats. It's also worth getting one that will write two-layer discs, as this lets you squeeze twice as much information on a DVD.

There's not much difference in price between the different drive speeds, so we recommend getting one that can write DVD+R and DVD-R at 16X, and DVD+R DL at 4X. If you'll be doing a lot of video projects and disc writing, upgrade to a 250GB hard disk as a minimum.

3 Interested in games? Then upgrade to 512MB or 1GB of memory and a 200GB disk and get a graphics card. Budget cards based on the GeForce FX 6600 graphics processor or Radeon X700 will cope with this year's games, but to play next year's just as smoothly (and enjoy gorgeous graphics today) you'll want anything up to a GeForce FX 7800GTX or Radeon X850XT. You'll also need a faster processor.

4 Which faster processor? Well, faster AMD processors such as the Athlon 64 3400+ are good value. An Athlon FX-based system will cost £300 more but offers much better performance. The alternative is a PC based on Intel's Pentium 4 processor. These are also pricier, but many people feel reassured by the Intel brand, and the fastest P4s always do well in our performance tests.

5 If you're really not interested in games you can definitely live with integrated or cheap graphics, but there are plenty more reasons to upgrade the memory, hard disk or processor.

If you'll use your PC for serious DTP, music or photo editing you need the same kind of processor, memory and disk as for games. For video editing, consider getting two hard disks, perhaps in a RAID array.

6 A quality sound system will enhance all manner of PC activities. To hear the surround soundtrack of a DVD at its best, you'll need a quality 5.1 speaker system. Games can also use such a system to throw sound effects around you. If you're interested in neither games nor DVDs (or don't want to trail wires all around the room), go for a quality stereo pair with a subwoofer to boost the bass instead.

If you're interested in music or want better-quality sound, you'll need to invest in a dedicated sound card. As well as providing enhanced sound, such as Environmental Audio eXtension (EAX), which tweaks the acoustics to make sound appear to be playing in different environments, you'll get higher-quality outputs and more inputs.

7 Although 17" LCD screens save on desk space and look stylish, the limited display size means some may find onscreen text hard to read. A 19" LCD will cost around £50 more, has the same resolution (1,280x1,024) and is easier on the eye. It's better for those who want to edit large photos, documents or spreadsheets, run two applications side by side, or just look important. Twenty-inch LCDs are available from £400 and have a higher resolution (1,600x1,200).

8 The standard set of connectors can be usefully improved with extra USB2 ports, to which most run-of-the-mill PC gadgets attach, and a FireWire port, for fancy gadgets including digital video (DV) cameras.

9 Windows XP Home Edition is preinstalled on most new PCs. Any extra software bundled should be assessed critically. It may be that you'll never actually use it. But equally, you may happen across a PC that includes software you'd otherwise have paid for, in which case you'll almost certainly save lots of money by having it preloaded, although you won't get technical support included.

10 Money left over? A TV card will let you watch television on your PC screen and record programmes to your hard disk, or capture analogue video from a camcorder. Rather than splashing out on an extended warranty, pay extra to get the make of PC your friends or colleagues swear by.

